

**Amendments to the Claims:**

Please replace all prior versions and listings of claims with the following Listing of Claims:

1. (Currently Amended) An isolated human protein ~~capable of participating in the human PTCH/SHH pathway during embryonic development and/or carcinogenesis, which is essentially comprised~~ consisting of the amino acid sequence of SEQ ID NO:1.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Currently Amended) A medicament, comprising[[: a]] the protein according to claim 1 ~~any of claims 1-4, or a nucleic acid encoding a protein according to any of claims 1-4.~~

6. (Withdrawn) A method of treating a condition involving tumors, comprising:  
administering a protein according to any of claims 1-4, or a nucleic acid encoding a protein according to any of claims 1-4 to a patient in need thereof.

7. (Withdrawn) A method of *in vitro* or *in vivo* diagnosis, wherein a protein according to any of claims 1-4, or a nucleic acid encoding a protein according to any of claims 1-4, is used.

8. (Withdrawn) A method of screening wherein a library of suitable candidate compounds is screened for modified drugs using a protein according to any of claims 1-4, as a lead compound.

9. (Withdrawn) A method of synthesis of a modified drug, wherein a protein according to any of claims 1-4 is used.

10. (Withdrawn) A modified drug identified by the method according to claim 8.

11. (Withdrawn) An antibody which specifically binds to a protein according to any of claims 1-4.

12. (Withdrawn) A recombinant cell expressing an antibody according to claim 11.

13 . (Currently Amended) A kit for the detection of a human PTCH2 polypeptide comprising in a container ~~a molecule selected from the group consisting of a protein according to claim 1 any of claims 1-4, or an antibody which specifically binds to a protein according to any of claims 1-4.~~

14. (Withdrawn) A method for treating a medical condition comprising:  
administering a therapeutic amount of a nucleic acid encoding a protein according to any of claims 1-4, to a patient in need thereof.

15. (Withdrawn) A probe comprising a nucleic acid encoding a protein according to any of claims 1-4.

16. (Withdrawn) A primer comprising a nucleic acid encoding a protein according to any of claims 1-4.

17. (Withdrawn) A diagnostic reagent comprising a nucleic acid encoding a protein according to any of claims 1-4.

18. (Withdrawn) A modified drug synthesized by the method according to claim 9.